John Williams' Shadow Government Statistics Analysis Behind and Beyond Government Economic Reporting

SHADOWSTATS BULLET EDITION NUMBER SEVEN

April 27, 2019

INITIAL FIRST-QUARTER 2019 GDP ESTIMATE WAS NOT CREDIBLE

Downturn Has Just Begun; Recession Remains in Play, With FOMC-Generated Financial Stresses Still Diminishing Consumer Activity

Consumer Controls 72% of GDP, but Generated Only 22% of GDP Growth

Advance First-Quarter Real GDP Gain of 3.17% Topped Consensus Forecasts, Strengthened Against 2.17% in the Fourth-Quarter, Yet the Numbers Were of Unusually Poor Quality

Bureau of Economic Analysis Is Hamstrung by Data-Quality Issues Tied to Underlying Government Shutdown Reporting Disruptions and Distortions

Only Two Months of the First-Quarter Trade Deficit Were Available, Where Initial Quarterly GDP Estimates Usually Are Based on Three Months

That Two-Month Quarterly Trade Deficit Narrowed Sharply, Signaling a Great Recession Style Collapse in Personal Consumption; That Deficit Guess Was the Largest Single Positive Contribution to First-Quarter GDP Growth

Positive Impact of the Deficit Narrowing Should Have Been Offset by an Even Greater Decline in Goods Consumption, Which Dropped Sharply, But Not Enough

Three Months of Likely Downside Revisions to First-Quarter GDP Follow, Into the July 26th GDP Benchmarking

Broad Money Supply Velocity Slowed in First-Quarter 2019, Suggestive of a Slowing Economy

Note to Subscribers: Special Commentary No. 983-B provides extended coverage of the current ShadowStats outlook for the U.S. economy and financial markets. This Bullet Edition No. 7 reviews the April 26th initial headline release of First-Quarter 2019 GDP, which came in strong at 3.2%, well above consensus expectations, let alone my prediction for a well-below consensus reading. The broad ShadowStats outlook, including a recession forecast have not changed, though, and the major points covered in No. 983-B remain intact. The headline "Advance" First-Quarter GDP Estimate was meaningfully shy of its final reporting quality, due to data distortions and disruptions resulting from the government shutdown. Unusually large (likely downside) revisions to headline growth are a fair bet going forward. Prospects for a revised, outright quarterly contraction in first-quarter GDP, versus just a sharp slowing from the headline "advance" growth levels, will be assessed in the context of the pending revisions and the hard reporting of still-delayed data in the month or two ahead.

The *ShadowStats* general outlook has not changed, specifically including a deepening U.S. economic downturn, mounting downside pressures on the U.S. dollar and stock market, and upside pressures on gold and silver prices in the weeks and months ahead.

Your comments and suggestions always are invited.
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ShadowStats Commentaries, Bullet Editions, Watches and Daily Updates:

- The *Daily Update* posts regularly on the *ShadowStats* home page (www.ShadowStats.com), covering major economic releases as published by the issuing authorities, usually within two-to-three hours of headline publication. Unusual market circumstances, as well as the pending *ShadowStats* publishing schedule also are reviewed there.
- The *Bullet Edition* is published multiple times per month, as dictated by economic reporting, and underlying or unusual economic and financial-market developments. Simply put, the *Bullet Edition* conveys brief communications and analyses on limited topics of particular near-term significance.
 - o Today's *Bullet Edition* reviews the initial reporting of First-Quarter 2019 GDP.
- The more-comprehensive *Regular Commentary* should publish about once per month, providing a regular and broader overview of unfolding conditions and likely developments, occasionally in the context of a *Special Commentary*.
 - o **Special Commentary No. 983-B** posted April 22nd.
- *Hyperinflation* and *Consumer Liquidity Watches* will update once per month, with alternating updates roughly every other week, with updates beginning in early May.

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Despite Headline Strength in First-Quarter GDP, Consumer Weakness Intensified Negative Revisions to the GDP and Underlying Numbers Should Rattle the Markets FOMC Likely Will Be Easing by September 2019

Headline New Recession Remains in Play

Note to Subscribers: My forecasts have been for an eventual, first-quarter 2019 GDP contraction—the onset of a new recession—with a well-below consensus number predicted for the headline "advance" estimate. I sure was wrong on the "advance" number, which came in well above consensus. Yet, the 3.2% headline growth was in the context of extremely unusual circumstances, suggestive of major reporting quality issues. The "advance" also highlighted mounting consumer liquidity stresses that still confirmed a likely and pending headline recession. The recession forecast remains in play, and the general ShadowStats outlook as discussed in <u>Special Commentary No. 983-B</u>, has not changed, other than as may be updated in this <u>Bullet Edition No.7</u>.

As to reporting quality, the underlying data and reporting used in the GDP estimation were distorted and disrupted heavily by the government shutdown. Out of that reporting turmoil, the Bureau of Economic Analysis had to make greater than usual assumptions in its initial GDP guesses. Three monthly revisions to first-quarter GDP follow, through the July 26th GDP benchmarking, and those revisions broadly should be to the downside. – *John Williams*

First-Quarter 2019 Gross Domestic Product "Advance" Estimate of 3.2% Was Not Credible and Should Face Major Downside Revisions. The initial, headline estimate of first-quarter 2019 real annualized GDP growth was 3.17%, up from 2.17% in fourth-quarter 2018, with respective annual real growth rates of 3.21% versus 2.97%, as released by Bureau of Economic Analysis (BEA) on April 26th (see *Graphs 1* to 4). The "advance" estimate was of questionable quality, reflecting underlying data that were disrupted and distorted meaningfully in the federal government's partial shutdown. Reporting quality also was impaired by more than the usual underlying BEA guesses needed to generate the headline GDP estimate.

Among those reporting-quality issues, consider that of the 3.17% headline GDP gain, 1.03% came from a narrowed deficit in Net Exports, thanks to a sharp decline in U.S. imports of consumer goods. That circumstance was seen previously at the onset of the Great Recession (discussed in <u>Special Commentary No. 983-B</u>). The decline in goods consumption should more than offset the gain from the trade-balance improvement, but that did not happen. Consider, too, that "advance" GDP estimates usually are based on

three months of initial trade deficit detail, but only two shutdown-distorted months were available here. Downside GDP revisions likely loom. That missing third month, the June trade deficit, is scheduled for release on Thursday, May 9th. Whatever is reported then will have implications for the first GDP revision (May 30th) and could rattle the markets if the GDP outlook suddenly turns more negative.

While it would be highly unusual for initial annualized real quarterly GDP growth of 3.2% to revise to an outright quarterly contraction, the data quality and underlying assumption questions allow for major growth revisions here. Three pending monthly revisions leave that circumstance as an open possibility, one that will be reviewed in the next month or so.

Nonetheless, given the unusual shift in consumer conditions suggested by the initial first-quarter GDP reporting, a recession signal is in hand, with an unfolding recession likely already underway. Such is far from obvious, however, given the first-quarter's headline strength. The ShadowStats recession forecast is in place, discussed in <u>Special Commentary No. 983-B</u> and updated for the comments in this <u>Bullet Edition No. 7</u>.

Still Beware July 26th, When a Formal Recession Likely Will Have Gained Popular Recognition. Again, the just-published "advance" estimate of 3.17% real annualized First-Quarter 2019 GDP faces three monthly revisions into the annual benchmarking on July 26th, which also will revise Fourth-Quarter 2018. Both periods likely will revise to the downside, with the first-quarter number a fair bet to be in real quarter-to-quarter contraction by then. Coincident with benchmarking will be the "advance" estimate of Second-Quarter 2019 GDP. With second-quarter GDP likely to show a second, consecutive real quarterly decline, that should set the stage for an eventual, formal "Recession" declaration. Nonetheless, FOMC and financial-market recognition of that circumstance should run well ahead of any formal declaration by the National Bureau of Economic Research (NBER).

Consumer Activity Accounted for 72.2% of the Level of 1q2019 GDP Activity Yet, It Generated Only 22.4% of 1q2019 GDP Growth, Down from 68.2% in 4q2018

Despite Rosy "Advance" First-Quarter GDP Headlines, the Economy Remained in Serious Trouble, Sinking Rapidly in Tandem With Faltering Consumer Liquidity. The U.S. consumer is the ultimate driving force behind the U.S. economy and economic activity. Where the levels of consumer consumption and investment accounted directly for 72.2% of the first-quarter 2019 GDP economy (Personal Consumption Expenditure plus Residential Investment), the remaining 27.8% of the economy, (Business, Government and Trade Activity) ultimately relies on and is driven by consumer activity and conditions.

Healthy GDP Growth Will Not Last Long Without a Financially Healthy Consumer. Yet, while consumer consumption and investment accounted directly for 72.2% of the GDP economy in first-quarter 2019, the consumer spending and investment generated only 22.4% of the "soaring" headline aggregate first-quarter 3.2% (3.17%) growth in that GDP economy. In contrast, where the consumer accounted

directly for 72.6% of the prior GDP economy in fourth-quarter 2018, consumer consumption and investment generated 68.2% of that quarter's headline 2.2% (2.17%) GDP growth.

First-Quarter 2019 GDP Growth by Component. On the consumer side, aggregate Goods consumption contributed a 0.14% (-0.14%) annualized contraction to the headline GDP aggregate growth rate. Services consumption contributed 0.96% to the headline GDP growth rate, including gains in Housing and Utilities, Healthcare, Financial Services, Insurance and Other Services, with more discretionary spending such as Recreation, Food Services and Accommodations contracting in the quarter. [See Table I for some comparative detail, generally a broader level of activity than reviewed here. Where the rate of change is expressed to the percentage second-decimal-point, those numbers may vary minimally from other publications, where I use the GDP numbers to the third decimal point for calculation. Standard BEA reporting detail takes the headline GDP numbers to the first decimal point level, but the third decimal point level detail also is available on the BEA site.]

Ex-Residential Investment (a contributing contraction of 0.11% [-0.11%], see *Graphs 5* and 6) and ex- a growth contribution of 0.65% from the build-up in Inventories of unsold products, the GDP growth contribution from Nonresidential Fixed Investment was nil for the hard assets of Structures and Equipment. All growth in that area came otherwise from the nebulous, accounting-gimmicked areas of Intellectual Property Products, with a net GDP growth contribution of 0.39% (including Software, Research and Development and Entertainment, literary and artistic originals).

The two-month based Net Exports contributed 1.03% of the total headline growth of 3.17% (see *Graphs 7* and 8).

In terms of government spending, the Federal Government's contribution to the quarter's headline GDP growth was 0.00%, while State and Local Government Spending (largely infra-structure) contributed 0.41% of the headline aggregate 3.17%.

GDP Implicit Price Deflator Showed a Sharp Slowing in Headline Inflation, Consistent With Other Inflation Measures Driven by Wildly Gyrating Oil Prices. Many thanks to those who have brought to my attention that the headline first-quarter 2019 GDP Implicit Price Deflator (IPD) slowed to an annualized quarterly rate of 0.65% from 1.86% in fourth-quarter 2018, a drop of 1.21%, which would boost annualized real quarterly GDP growth by 1.21%, given the shift in headline inflation. The weaker the inflation used to deflate nominal growth, the stronger will be resulting real growth rate. The circumstance here reflects a common issue with fourth-quarter 2018 U.S. inflation, including the CPI, which was depressed by collapsing oil and gasoline prices. Recent real growth in items such as real average hourly earnings also were spiked by the same issue. A comparison of year-to-year inflation rates through first-quarter 2019 show the effect in Table 2: Comparative Measures of Quarterly Year-to-Year and Full Year Inflation. The changes with declining inflation, however, also affect the level of nominal numbers. Those headline inflation numbers now are spiking anew with rising gasoline prices. I know no easy way around the effective distortions, other than being aware of them and mentioning them. See also Graph 9 comparing the IPD and the Consumer Price Index CPI-U.

[Table 1: GDP Quarterly Detail follows on the next page.]

Table 1: Gross Domestic Product, Quarterly Detail (First Quarter 2018 to First-Quarter 2019)

Annualized Quarterly Real Growth in Headline Gross Domestic Product Initial Estimate of First-Quarter 2019 GDP and Earlier Headline Data Growth Contribution by Consumption and Product Sector									
Growth Contribution by Consumption and Product Sector									
	1st-Q	2nd-Q	3rd-Q	4th-Q	1st-Q				
GDP	2018	2018	2018	2018	2019				
COMPONENTS	Final	Final	Final	"Final"	"Advance				
					Estimate				
CONTRIBUTING ECONOMIC SECTOR									
Personal Consumption Expenditures									
· Goods	-0.13%	1.16%	0.90%	0.54%	-0.14				
Motor Vehicles	-0.15%	0.16%			-0.49				
· Services	0.49%								
	0.43/0	1.42/0	1.77 /0	1.12/0	0.30				
Gross Private Domestic Investment									
Fixed Investment	1.34%								
Residential	-0.14%								
Change in Private Inventories	0.27%	-1.17%	2.33%	0.11%	0.65				
Net Exports of Goods and Services	-0.02%	1.22%	-1.99%	-0.08%	1.03				
Government Consumption/Investment	0.27%	0.43%	0.44%	-0.07%	0.41				
GDP ANNUALIZED REAL GROWTH	2.22%	4.16%	3.36%	2.17%	3.17				
Final Sales, GDP Less Inventories	1.95%	5.33%	1.03%						
CONTRIBUTING PRODUCT SECTOR									
Goods	1.20%	1.91%	1.76%	1.66%	1.90				
Services	0.73%	1.78%	1.77%	0.99%	1.09				
Structures	0.28%	0.47%	-0.17%	-0.48%	0.18				
GDP Annualized Real Growth	2.22%	4.16%	3.36%	2.17%	3.17				
	SUPPLEMEN	TAI							
Annualized Quarter-to-Quarter Real GD		· · · · · · · · · · · · · · · · · · ·	Implicit Pr	ice Deflato	r Inflatio				
Gross Domestic Product (GDP)	2.22%	1							
Gross Domestic Income (GDI)	3.90%			1.66%	n.				
Gross National Product (GNP)	2.20%	4.04%	3.05%	2.12%	n.				
ShadowStats Corrected-Inflation GDP*	0.15%	2.05%	1.27%	0.10%	1.08				
mplicit Price Deflator (IPD) Inflation	2.02%	3.31%	1.51%	1.86%	0.65				
Year-to-Year Real GDP Change	and Headli	ne Implicit	Price Defla	tor Inflatio	n				
Gross Domestic Product (GDP)	2.58%			l I					
Gross Domestic Income (GDI)	2.36%								
Gross National Product (GNP)	2.73%		2.96%		n.				
ShadowStats Corrected-Inflation GDP*	0.51%		0.92%		1.12				
mplicit Price Deflator (IPD) Inflation	1.95%	2.50%	2.39%	2.17%					
Sources: Bureau of Economic Analysis (BEA)		l l		L I					

Table 2: Comparative Measures of Quarterly Year-to-Year and Full Year Inflation

Year-to-Year Inflation for Headline Quarterly and Annual Averages of Various Measures of Consumer, Producer and ShadowStats Price Indices, GDP Implicit Price Deflator and Oil Prices, 2014 to 1q2019, Not Seasonally Adjusted

						Chained	Shadow-		PPI	GDP	Oil
Quarter	CPI-U	Food	Energy	Core (1)	CPI-W	CPI-U*	Stats (2)	FD-PPI	Goods	IPD (3)	Brent (4)
2014			<u> </u>	. ,			. ,			,	
1st-Q	1.41%	1.40%	-0.03%	1.62%	1.31%	1.26%	9.06%	1.35%	0.98%	1.74%	-3.83%
2nd-Q	2.05%	2.23%	3.23%	1.91%	2.04%	1.86%	9.79%	1.93%	2.22%	2.08%	6.95%
3rd-Q	1.78%	2.75%	0.81%	1.77%	1.70%	1.61%	9.51%	1.80%	1.74%	2.07%	-7.56%
4th-Q	1.25%	3.22%	-5.64%	1.71%	0.97%	1.05%	8.93%	1.25%	0.09%	1.67%	-30.03%
2015											
1st-Q	-0.06%	2.84%	-18.87%	1.70%	-0.68%	-0.35%	7.52%	-0.48%	-4.05%	1.22%	-50.09%
2nd-Q	-0.04%	1.79%	-16.87%	1.76%	-0.59%	-0.20%	7.55%	-0.81%	-4.40%	1.16%	-43.80%
3rd-Q	0.11%	1.62%	-16.03%	1.84%	-0.41%	-0.10%	7.71%	-0.93%	-4.41%	1.05%	-50.50%
4th-Q	0.47%	1.21%	-14.89%	2.01%	0.03%	0.18%	8.09%	-1.26%	-4.36%	0.87%	-43.01%
2016											
1st-Q	1.08%	0.83%	-10.56%	2.24%	0.79%	0.76%	8.73%	0.00%	-2.66%	0.87%	-37.30%
2nd-Q	1.05%	0.65%	-9.48%	2.21%	0.71%	0.73%	8.71%	0.12%	-2.24%	0.99%	-26.09%
3rd-Q	1.12%	-0.02%	-7.79%	2.24%	0.76%	0.74%	8.78%	0.21%	-1.49%	1.00%	-9.21%
4th-Q	1.80%	-0.33%	2.18%	2.15%	1.65%	1.50%	9.52%	1.37%	0.90%	1.50%	12.62%
2017											
1st Q	2.54%	0.11%	12.26%	2.17%	2.56%	2.30%	10.31%	1.98%	3.71%	2.11%	58.36%
2nd Q	1.90%	0.76%	5.58%	1.77%	1.80%	1.50%	9.62%	2.21%	3.07%	1.70%	8.75%
3rd Q	1.97%	1.15%	6.64%	1.69%	1.96%	1.56%	9.70%	2.35%	2.96%	1.81%	13.75%
4th Q	2.12%	1.43%	7.55%	1.75%	2.18%	1.71%	9.86%	2.76%	3.63%	1.97%	25.17%
2018	2 240/	4.450/	6.760/	4.020/	2 200/	4.700/	0.000/	2.770/	2.400/	4.050/	24.760/
1st Q	2.21%	1.45%	6.76%	1.93%	2.30%	1.76%	9.96%	2.77%	3.18%	1.95%	24.76%
2nd Q	2.71%	1.35%	10.50%	2.21%	2.89%	2.30%	10.50%	3.02%	3.91%	2.50%	50.41%
3rd Q	2.64%	1.40%	8.98%	2.24%	2.79%	2.34%	10.42%	3.03%	3.92%	2.39%	44.09%
4th Q 2019	2.20%	1.39%	3.90%	2.18%	2.22%	1.94%	9.95%	2.75%	2.70%	2.17%	12.00%
1st Q	1.64%	1.90%	-3.41%	2.09%	1.48%	1.52%	9.35%	2.03%	0.82%	1.83%	-5.63%
Year	1.04/0	1.50/0	3.41/0	2.0570	1.70/0	1.5270	3.3370	2.0570	0.0270	1.0570	3.0370
2014	1.62%	2.40%	-0.34%	1.75%	1.50%	1.45%	9.32%	1.58%	1.26%	1.89%	-8.83%
2015	0.12%	1.86%	-16.70%	1.83%	-0.41%	-0.12%	7.72%	-0.87%	-4.30%	1.07%	-47.14%
2016	1.26%	0.28%	-6.58%	2.21%	0.98%	0.93%	8.94%	0.42%	-1.38%	1.09%	-16.59%
2017	2.13%	0.86%	7.92%	1.84%	2.13%	1.76%	9.87%	2.33%	3.34%	1.90%	24.03%
2018	2.44%	1.40%	7.53%	2.14%	2.55%	2.14%	10.21%	2.89%	3.42%	2.25%	31.80%

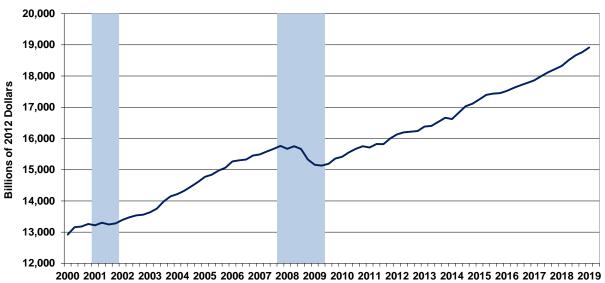
^{*} Regularly revised lower from re-weightings, usually with a one-year lag. (1) Ex-Food and Energy. (2) ShadowStats Alternate CPI, 1980 Base.

Sources: ShadowStats, Bureau of Labor Statistics, Bureau of Economic Analysis, Department of Energy

⁽³⁾ Seasonally Adjusted, Headline IPD; ShadowStats IPD About 2% More. (4) Averages of daily Brent price FOB.

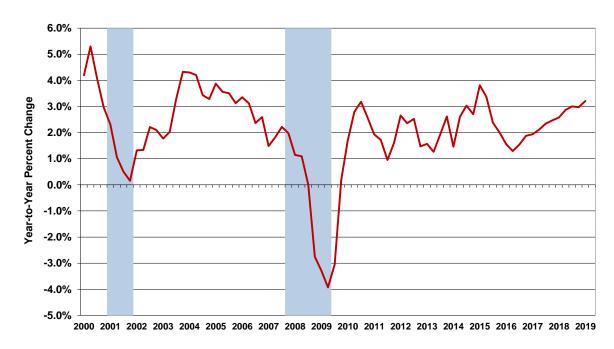
Graph 1: Real GDP (First-Quarter 2000 to "Advance" First-Quarter 2019)

Real Gross Domestic Product Quarterly in Billions of 2012 Dollars 2000 to "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA]

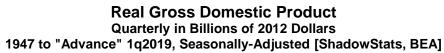


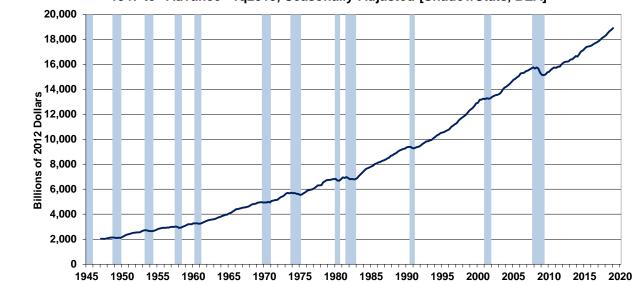
Graph 2: Real GDP, Year-to-Year % Change (First-Quarter 2000 to "Advance" First-Quarter 2019)

Quarterly Real Gross Domestic Product Year-to-Year Change, 1q2000 to "Advance" 1q2019 [ShadowStats, BEA]



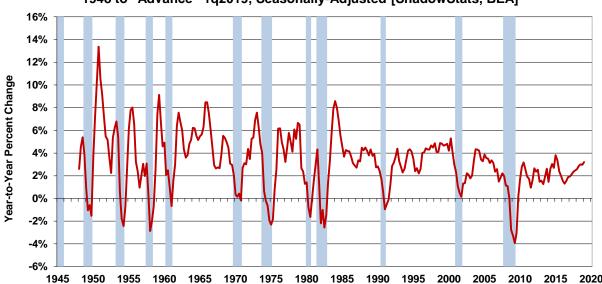
Graph 3: Real GDP (1947 to "Advance" First-Quarter 2019)





Graph 4: Real GDP, Year-to-Year % Change (First-Quarter 1948 to "Advance" First-Quarter 2019)

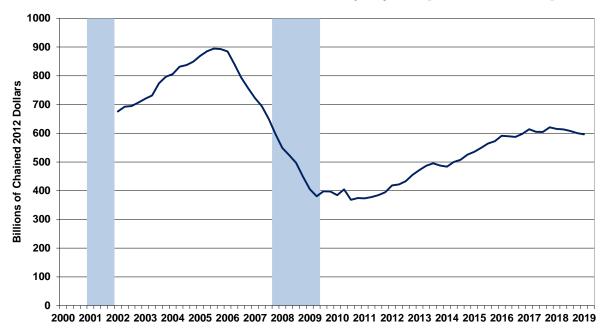
Real Gross Domestic Product Year-to-Year Percent Change by Quarter 1948 to "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA]



Graph 5: Real Gross Domestic Private Residential Investment to "Advance" First-Quarter 2019 GDP

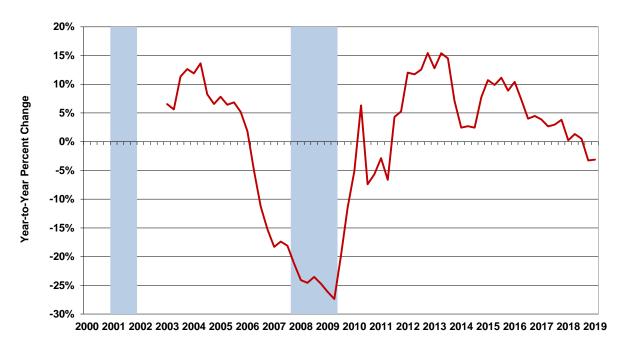
GDP Gross Private Domestic Investment - Residential Billions of Chained 2012 Dollars

To "Advance" First-Quarter 2019, Seasonally-Adjusted [ShadowStats, BEA]



Graph 6: Real Gross Domestic Residential Investment (Year-to-Year Change) to "Advance" First-Quarter 2019

GDP Gross Private Domestic Investment - Residential Real Year-to-Year Change, 1q2003 to "Initial" 1q2019 [ShadowStats, BEA]



Graph 7: Real Net Exports of Goods and Services in GDP (First-Quarter 1994 to "Advance" First-Quarter 2019)

U.S. Net Exports of Goods and Services (GDP Accounting) Quarterly Deficit at Annual Rate (1q1994 to "Advance" 1q2019) Seasonally-Adjusted [ShadowStats, BEA]



Graph 8: Real U.S. Merchandise Trade Deficit (First-Quarter 1994 to First-Quarter 2019)

Real U.S. Merchandise Trade Deficit (Census Basis)
Quarterly Deficit at Annual Rate, 1994 to Early-1q2019 (Feb)
Seasonally-Adjusted [ShadowStats, Census]



Graph 9: Inflation and Real Gross Domestic Product (First-Quarter 2000 to "Advance" First-Quarter 2019)

GDP Implicit Price Deflator vs. CPI-U, Annual Inflation Seasonally-Adjusted Year-to-Year Percent Change 2000 to "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA, BLS]



Real GDP Shows No Economic Expansion, When Corrected for Understated Inflation

While Headline Real GDP Has Rallied by 20.0% Off Its Fourth-Quarter 2007 Pre-Recession Peak, No Other Series Has. *Graphs 1* to 4 plot the headline GDP as published by the Bureau of Economic Analysis (BEA). Discussed in *Special Commentary No. 983-B*, *Section 4: Underlying Reality* (page 35), headline real GDP growth has been systematically overstated, through the recasting and understatement of headline GDP inflation. ShadowStats regularly restates the GDP series for the gimmicked inflation understatement of about two-percent, and has updated those graphs and calculations through first-quarter 2019 GDP (see *Graphs 10* to *13*). See *Special Commentary No. 968-Extended* for full background detail.

Updated from <u>Special Commentary No. 983-B</u>, the headline real first-quarter 2019 GDP has fully recovered its fourth-quarter 2007 pre-recession peak, and has expanded beyond that peak by 20.0%, growing at an annualized quarterly pace of 3.2%. In contrast, the ShadowStats Corrected-Inflation Measure, which shows a pattern of economic growth paralleling the Manufacturing Sector, remains shy of recovering its fourth-quarter 2007 peak by 4.7% (-4.7%), with annualized real first-quarter 2019 growth of 1.1%.

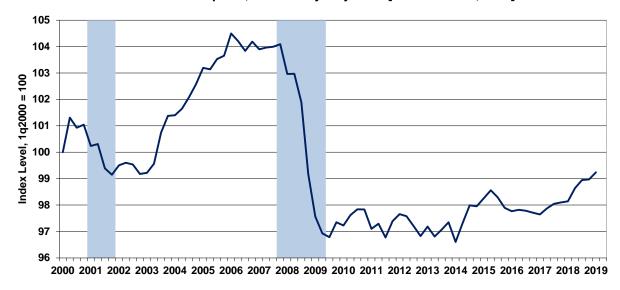
[Graphs 10 to 13 begin on the Next Page]

Underlying Economic Reality – Alternate Real GDP Using Corrected Inflation The plots in Graphs 10 to 13 reflect GDP deflated by the Implicit Price Deflator corrected for understated annual inflation. For background, see *Special Commentary No. 983-B* and *Special Commentary No. 968-Extended*.

Graph 10: Corrected-Inflation Based GDP (First-Quarter 2000 to "Advance" First-Quarter 2019)

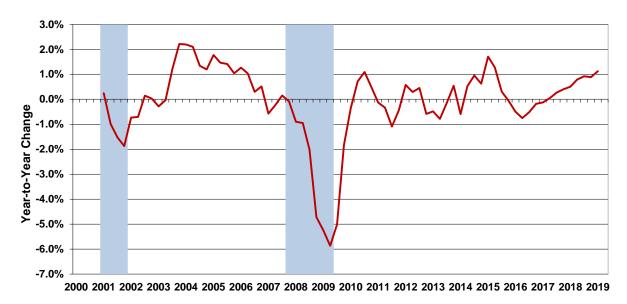
Corrected-Inflation Real Gross Domestic Product

Nominal GDP Deflated by Implicit Price Deflator Corrected for Roughly Two-Percentage Point Understatement of Annual Inflation To "Advance" 1q2018, Seasonally-Adjusted [ShadowStats, BEA]



Graph 11: Corrected-Inflation Based GDP, Yr-to-Yr % Change (2000 to "Advance" First-Quarter 2019)

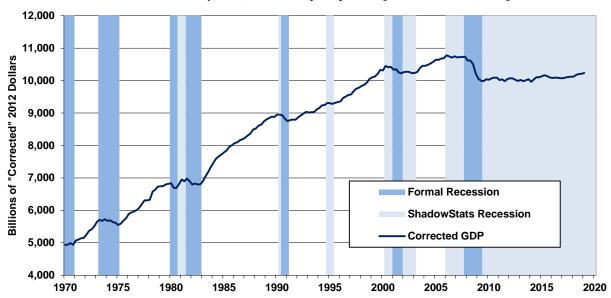
Corrected Gross Domestic Product, Yr-to-Yr Percent Change 2000 to "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA]



Graph 12: Corrected-Inflation Based GDP (1970 to "Advance" First-Quarter 2019)

Corrected Real Gross Domestic Product Nominal GDP Deflated by Implicit Price Deflator Adjusted for Understatement of Annual Inflation

To "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA]

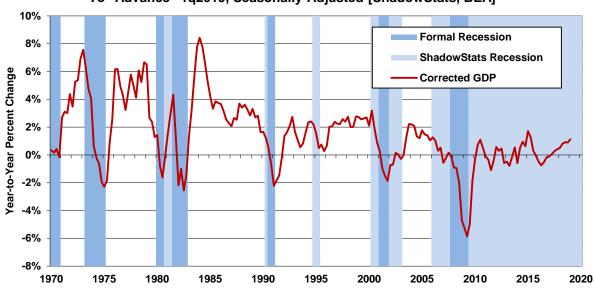


Graph 13: Corrected-Inflation Based GDP, Yr-to-Yr % Change (1970 to "Advance" First-Quarter 2019)

Corrected Real Gross Domestic Product

Adjusted for Understatement of Annual Inflation Year-to-Year Percent Change

To "Advance" 1q2019, Seasonally-Adjusted [ShadowStats, BEA]



[Coverage of First-Quarter 2019 Velocity of Money begins on the next page.]

Broad Money Supply Velocity Slowed in First-Quarter 2019

First-Quarter 2019 Velocity of Money Turned Slightly Lower for Money Supply M2 and M3, Primarily Due to Slowing Nominal GDP Growth; Velocity Turned Slightly Higher for Slowing M1. The Velocity of Money turned minimally lower for M2 and M3, and higher for M1, with the initial reporting of first-quarter 2019 GDP on April 26th. Reflecting relatively slower nominal GDP growth than in Money Supply M2 and M3, the broader money supply measures showed a slowing Velocity of Money, usually seen with slowing economic activity, while relatively slowing M1 growth reflected a minor uptick in velocity.

Reflected in accompanying graphs, only quarterly data from 1959-on are used, where that is the starting point of consistent, historical estimates of Money Supply M1, M2 and M3. When the Federal Reserve ceased publishing its M3 measure in 2006, ShadowStats began publishing a continuing M3 estimate based as closely as possible on the Federal Reserve definitions. This Velocity of Money analysis is discussed and plotted based on the initial estimate of First-Quarter 2019 GDP. Where the second and third GDP estimates rarely undergo enough of a revision to alter the accompanying velocity calculations and graphs, ShadowStats usually uses the "advance" or first-estimate of the quarterly GDP for the velocity calculation. In the current circumstance, that could change with meaningful revised estimates of first-quarter 2019 GDP.

Reflecting nominal M1 growth slowing faster than the GDP, and growth in the first-quarter GDP slowing faster than the broad money supply measures M2 and M3, the first-quarter 2019 Velocity of Money notched minimally higher for Money Supply M1, and lower for M2 and M3, as seen in *Graphs 14* and *15*, suggestive of the slowing economy seen going into the unofficial 2015 recession surrounding series such as Industrial Production (see *Special Commentary No. 983-B*, *Section 4*, page 35, *Graphs 32* to *35*, for example). Velocity is a measure of how many times the money supply turns over in a year, versus the broad economy (GDP). The higher the velocity, usually the higher the pace of inflation and often the level of economic activity, and vice versa.

Velocity is calculated simply as the ratio of the nominal GDP to the nominal Money Supply measure. Nominal GDP is in the numerator and the nominal Money Measure is in the denominator of the velocity ratio. Slowing velocity indicates a relatively slower pace of nominal economic growth versus the money supply growth, and vice versa.

Subscribers often ask for specifics on the velocity of the money supply, with the result that this section has become a standard feature for *Hyperinflation Watches* and *Commentaries* covering the "advance" GDP reporting of a given quarter. The nature of velocity is discussed in further detail in the 2008 *Money Supply Special Report*. Again, velocity simply is the number of times the money supply turns over in the economy in a given year, or the ratio in nominal terms (not adjusted for inflation) of GDP to the money supply. It is a residual number, not otherwise open to calculation or independent surveying.

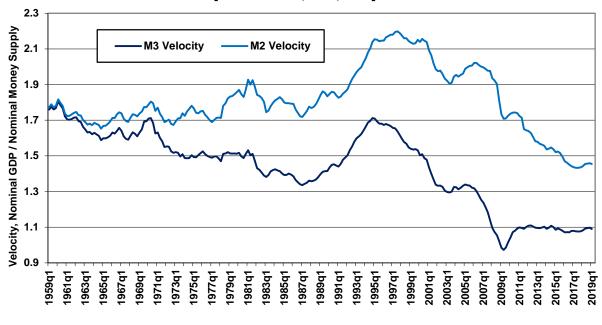
Graph 14: Velocity of Money – M1 (1959 to First-Quarter 2019)

Velocity of Money Supply M1 (1q1959 to 1q2019) Nominal Gross Domestic Product/Nominal Money Supply [ShadowStats.com, FRB, BEA]



Graph 15: Velocity of Money – M2 and M3 (1959 to First-Quarter 2019)

Velocities of Money Supply M3 and M2 (1q1959 to 1q2019) Nominal Gross Domestic Product/Nominal Money Supply [ShadowStats, FRB, BEA]



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